KI NE 5305  Applied Statistical Principles in Kinesiology
Fall, 2010

Professor:    Dr. Mark D. Ricard
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Office Hours:  By Appointment

Location & Time:   MAC 222, Thursday, 5:00 PM – 7:50 PM,

Course Objectives:
Upon successful course completion, students will demonstrate:
1. Their knowledge of the assumptions, violations and implementation of the following statistical procedures: correlation, t-test, ANOVA, ANCOVA, linear regression, multiple regression and intraclass correlation.
2. Their ability to interpret a research design, choose and run the appropriate statistical procedure, synthesize the statistical output and write a results section of a manuscript based upon the statistical output.

Course Description:

**KI NE 5305 Applied Statistical Principles in Kinesiology (3-0)** The course covers descriptive statistics, elementary probability, one- and two-population mean and variance comparisons, ANOVA, simple linear regression, and correlations. In addition, more advanced principles in parametric and non-parametric statistics will be emphasized.


Grading:
As a policy of the University of Texas at Arlington (UTA) outlined in the official Graduate Catalog, graduate credit will be given for grades of A, B, or C (as well as P) for work done at UTA, subject to the following conditions:
1. The student must maintain a B average in all work done in the major.
2. The student must maintain a B average in all work done in the minor.
3. The student must maintain a B average in all advanced work.
Grades in this course will be based on the following percentages:

Exams (2): 90%
Assignments: 10%

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<tr>
<th>Week</th>
<th>Date</th>
<th>Chapter</th>
<th>Tentative Course Schedule</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>8-26</td>
<td>1: Why learn statistics</td>
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<td>2: Everything you wanted to know about statistics</td>
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<td>3: The SPSS environment</td>
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<td>Week 2</td>
<td>9-2</td>
<td>4: Exploring data with graphs</td>
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<td>5: Exploring assumptions</td>
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<td>Week 3</td>
<td>9-9</td>
<td>6: Correlation</td>
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<td>Special topic: Reliability, Intra-class correlation &amp; minimum detectable change</td>
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<td>Week 4</td>
<td>9-16</td>
<td>7: Regression</td>
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<td>Week 5</td>
<td>9-23</td>
<td>Multiple Regression and Non-Linear Regression</td>
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<td>Week 6</td>
<td>9-30</td>
<td>9: Comparing two means</td>
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<td>Week 7</td>
<td>10-7</td>
<td>10: Comparing several means ANOVA (GLM 1)</td>
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<td>Week 8</td>
<td>10-14</td>
<td>Mid Term Exam</td>
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<td>Week 9</td>
<td>10-21</td>
<td>11: Analysis of covariance, ANCOVA (GLM 2)</td>
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<td>Week 10</td>
<td>10-28</td>
<td>12: Factorial ANOVA (GLM 3)</td>
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<td>Week 11</td>
<td>11-5</td>
<td>13: Repeated-measures designs (GLM 4)</td>
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<td>Week 12</td>
<td>11-11</td>
<td>14: Mixed design ANOVA (GLM 5)</td>
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Service Learning ASSIGNMENT You will each be assigned to run stats and explain them for undergraduate research methods and applied exercise physiology. You can meet the undergraduates in person, or do your consulting via email.

Week 13 | 11-18 | Chapter 15: Non-parametric tests  |
Week 16 | 12-2  | Chapter 19 Multilevel Linear Models  |
Week 16 | 12-9  | Review for Final  |
Week 15 | 12-16 | Final Exam (Comprehensive Chapters 1-13)  |

Drop Policy:
The Department of Kinesiology will not warn students nor drop students for excessive absences. It is the responsibility of the student to complete ADDING, DROPPING or withdrawing from school within the appropriate time frame established by the University Registrar (deadlines to be found in the Schedule of Classes). Any student that does not officially drop the class by the appropriate drop dates will be given an "F" for the course.

Americans With Disabilities Act:
The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 93112 – The Rehabilitation Act of 1973 as amended. With passage of new federal legislation entitled Americans With Disabilities Act – (ADA), pursuant to section
504 of The Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

As a faculty member, I am required by law to provide “reasonable accommodation” to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty at the beginning of the semester and in providing authorized documentation through designated administrative channels.

**Student Support Services:**
The University supports a variety of student success programs to help you connect with the University and achieve academic success. They include learning assistance, developmental education, advising and mentoring, admission and transition, and federally funded programs. Students requiring assistance academically, personally, or socially should contact the Office of Student Success Programs at 817-272-6107 for more information and appropriate referrals.

**Academic Dishonesty:**
It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University. “Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.” (Regents’ Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22)

**Bomb Threats:**
If anyone is tempted to call in a bomb threat, be aware that UTA will attempt to trace the phone call and prosecute all responsible parties. Every effort will be made to avoid cancellation of presentations/tests caused by bomb threats. Unannounced alternate sites will be available for these classes. Your instructor will make you aware of alternate class sites in the event that your classroom is not available.

**Final Review Week:**
A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabi. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week.

**Library Policy:**
For assistance with your library needs in this course, please consult the College of Education and Health Professions librarian Helen Hough at hough@uta.edu, or (817) 272-7429.
The University of Texas at Arlington College of Education Mission, Core Values and Professional Dispositions

MISSION: To develop and deliver an educational program that ensures the highest teacher, administrator and allied health science preparation and performance and to be a recognized contributor in the field of educational and allied health science research and practice through effective teaching, quality research and meaningful service. The Educator and Administrator Preparation units' collaboratively developed shared vision is based on these CORE VALUES, dispositions and commitments to:

• Excellence • Diversity
• Learner-centered environment • Technology
• Research-based • Field Experiences
• Collaboration • Life-long Learning

Each candidate in the Educator and Administrator Unit of the College of Education of UT-Arlington will be evaluated on PROFESSIONAL DISPOSITIONS by faculty and staff. These dispositions have been identified as essential for a highly-qualified educator. Instructors and program directors will work with candidates rated as “unacceptable” in one or more stated criteria. The candidate will have an opportunity to develop a plan to remediate any deficiencies.

Demonstrates excellence
• Meets stated expectations of student performance.
• Keeps timelines. Arrives on time for class and other activities.
• Produces significant artifacts of practitioner evidence.
• Possesses a willingness to set goals.
• Attends all classes/trainings and practicum experiences.
• Completes activities as assigned.
• Has appropriate personal appearance and/or hygiene for professional setting.

Participates in a learner centered environment and shows respect for self and others
• Uses appropriate and professional language and conduct.
• Supports a “high quality” learning environment.
• Shows respect and consideration for the thoughts and feelings of others.

Research-based pedagogy
• Has an awareness of and willingness to accept research-based concepts.
• Identifies important trends in education.
• Demonstrates interests in learning new ideas and strategies.
• Relates class discussions and issues to current events in education.

Participates in on-going collaboration with peers and professionals
• Demonstrates kindness, fairness, patience, dignity and respect in working with peers, staff and instructors.
• Works effectively with others.
• Assists others in the university classroom or practicum setting.
• Demonstrates openness to assistance from others.
• Receives feedback in a positive manner and makes necessary adjustment.

Exhibits stewardship of diversity
• Shows appropriate stewardship and tolerance to diverse people, environments, and situations.

Advocates use of technology
• Uses and applies existing technologies sufficiently in work.
• Shows a willingness to use and apply emerging technologies in work.
• Shows interest in the learner and the learning-process
• Demonstrates significant learning improvement over time.
• Shows interest in the learning process and demonstrates the necessary amount of time, energy, and enthusiasm for becoming better learners, teachers, and practitioners.